gulls, herons, jaegers, loons, murres, petrels, puffins, shearwaters and terns.

POTTERY PRODUCTS

The makers of pottery in the United States reported another record-breaking year in 1917 in value of output, which was $56,162,522, an increase of $7,945,280, or more than 16 per cent. over the value in 1916, according to figures compiled under the direction of Jefferson Middleton, of the United States Geological Survey, Department of the Interior.

The imports of pottery during the year were necessarily small, and the demand was fully equal to the largest domestic supply that would have been produced under normal codnditions, but the American potters found it impossible to supply the demand. Though the value of the output was the largest yet recorded, the volume of the product was probably not so large as it had been in some other years. Few plants, if any, ran to capacity, and many of them did not market more than three fourths of their normal output. The increased cost of labor and raw materials made it necessary to fix higher prices for the wares than those that have prevailed in the last few years. The imports showed an increase over those of 1916 but were much below normal imports before the war. This increase was due chiefly to greater imports from Japan, whose wares are now finding a larger market in the United States.

Notwithstanding the handicaps which the pottery industry suffered in 1917, greater efforts were made to place the industry on a firmer foundation than ever. Realizing that after the war he will have the keenest competition, and knowing that in order to hold his present trade he must not only make ware of superior quality but must be able to undersell all foreign competitors, the American potter has begun to study not only how to improve the quality of his wares but to find or devise labor-saving machines and improved kilns. The report of the United States Potters' Association shows that a number of such devices that give promise of lowering the cost of labor and fuel were introduced in 1917 or were being successfully developed. Among these devices are sagger-making machines, a conveyer type of stove, a casting process that makes large production possible by unskilled labor, and down-draft and tunnel kilns that insure a large saving of fuel.

The effort to establish in the southern states a pottery for the manufacture of high-grade ware has, after many years, at last been successful. In 1917, for the first time, white ware was manufactured in the south. The Southern Potteries (Inc.), began to operate at Erwin, Tenn., a 10-kiln plant for the manufacture of semi-vitreous porcelain table ware, using domestic clays exclusively.

Another important development in the pottery industry of the United States is the production of chemical porcelain, the manufacture of which in this country was considered impossible before the war. Several operators are now making chemical porcelain which satisfactorily meets the exacting requirements of the laboratory.

In 1917 the value of the output of every variety of pottery classified by the Geological Survey, except red earthenware, was greater than in 1916. White ware showed the largest increase—$2,729,079, or 15 per cent. Porcelain electrical supplies also showed a large increase —$2,417,166, or 34 per cent. China, the highest grade of pottery, has been a minor product in value, yet its value in 1917 showed an increase of $1,327,534, or 38 per cent., compared with 1916. Its value in 1917 was nearly twice as great as in 1913.

The value of white ware, including china, which comprises the general household wares and constitutes more than 45 per cent. of the value of all pottery, was $25,726,375 in 1917, an increase of $4,056,613, or 19 per cent., over 1916. If to this sum is added the value of the high-grade products sanitary ware and porcelain electrical supplies, the total value in 1917 was $47,814,178, or $7,998,579 more than in 1916.